

Figure 1 *Flowchart of the study*

CLAIMS

1. A body tissue-contacting topsheet for an absorbent article that is to be placed in contact with a wearer's hydrous body tissues, said topsheet comprising a non-absorbent, moderately hydrophilic to substantially hydrophobic material having an extensibility in at least one direction of greater than or equal to about 30% under a force of 50 grams, said topsheet undergoing a caliper change of greater than or equal to about 30% when tested according to the Thickness Change Test.
2. The body tissue-contacting topsheet of Claim 1 having a critical surface tension of less than or equal to about 45.
3. A body tissue-contacting topsheet according to Claim 1 which is three-dimensionally shaped.
4. A body tissue-contacting topsheet according to Claim 1 which has a body-contacting surface, said body-contacting surface having areas of varying height, and a plane can be placed adjacent the highest points of the body-contacting surface, said topsheet having a depth, wherein the amount of surface area of said topsheet that lies above a plane that passes through said topsheet at a depth of 300 microns below the plane that passes through the highest points of the body-contacting surface is less than or equal to about 15% of the surface area of the topsheet as defined by the Bearing Ratio.
5. The body tissue-contacting topsheet of Claim 3 in which the amount of surface area that lies above a plane that passes through said topsheet at a depth of 400 microns is less than or equal to about 40%.
6. The body tissue-contacting topsheet of Claim 3 which comprises a nonwoven web having at least one irregular surface structure.
7. The body tissue-contacting topsheet of Claim 4 comprising a mechanically altered nonwoven web.
8. The body tissue-contacting topsheet of Claim 5 comprising a nonwoven web having a plurality of corrugations loosely formed therein.

9. An absorbent device insertable into the interlabial space of a female wearer comprising the body tissue-contacting topsheet of Claim 1.
10. The absorbent device of Claim 7 further comprising an acquisition zone with at least one aperture therein.
11. A tampon comprising the body tissue-contacting topsheet of Claim 1.
12. A method of capturing discharges from a source of discharges on a wearer's body, wherein at least a portion of said source of discharges is within hydrous membranes having irregular surfaces, said method comprising:
- providing an absorbent article having a liquid pervious top surface structure, said top surface structure having a body contacting surface, wherein said top surface structure has at least regions that are extensible; and
- placing said absorbent article adjacent to hydrous membranes of a wearer's body, with said body-contacting surface of said top surface structure is at least partially in contact with said hydrous membranes.
13. The method of Claim 12 wherein said top surface structure is extensible in an amount greater than or equal to about 30% in at least one direction under a force of 50 grams.
14. The method of Claim 13 wherein said top surface structure has a three-dimensionally-shaped body-contacting surface.
15. The method of Claim 13 wherein said top surface structure undergoes a caliper change of greater than or equal to about 30% when tested according to the Thickness Change Test.
16. The method of Claim 13 wherein said top surface structure comprises a first component having apertures therein, and a second component that underlies said first component, said second component having portions that underlie the apertures in said first component, and these portions of said second component form part of the body-contacting surface of said top surface component.
17. The method of Claim 12 wherein said hydrous membranes are interlabial tissues.

18. The method of Claim 12 wherein said hydrous membranes are vaginal membranes.
19. The method of Claim 13 wherein said body-contacting surface of said top surface structure is at least partially hydrophobic.
20. A body tissue-contacting topsheet for an absorbent article that is to be placed in contact with a wearer's hydrous body tissues, said topsheet comprising a non-absorbent, moderately hydrophilic to substantially hydrophobic material having an extensibility in at least one direction of greater than or equal to about 20% under a force of 50 grams, said topsheet undergoing a caliper change of greater than or equal to about 40% when tested according to the Thickness Change Test.
21. A body-contacting topsheet for an article that is to be placed in contact with a wearer's body, said topsheet comprising a web having a body-contacting surface and an opposed underside, said topsheet having a plurality of ridges and valleys therein, and a substance for maintaining said topsheet in contact with a wearer's body located on at least some of said ridges on said body-contacting surface of said topsheet, wherein said ridges are substantially devoid of said substance.
22. A body-contacting topsheet according to Claim 21 which is extensible.
23. An absorbent device insertable into the interlabial space of a female wearer, said absorbent device having an axis for bending said device, two surfaces, said surfaces comprising:

a liquid pervious top surface structure;

an opposed surface; and

absorbent material between said surfaces,

wherein when the absorbent device is folded along said axis for bending and inserted into the wearer's interlabial space, the topsheet maintains contact with the walls of the wearer's labia, especially if the device is primarily contained within the labia, the underside of the two halves of the interlabial device which would normally be provided with a backsheet, will contact each other so that the device assumes an inverted V or U-shaped cross-sectional structure, and the portion of the device which to eliminate the need for a liquid impervious backsheet.

24. An absorbent article insertable into the interlabial space of a female wearer comprising:

an absorbent storage core and a

body-contacting vaginal discharge receiving layer overlaying said storage core;

said body-contacting vaginal discharge receiving layer being compressible and adjustable to conform to the inner labial surface texture to fill in channels within the inner labia which transport and collect bodily discharges; and

wherein said absorbent storage core and said body-contacting vaginal discharge layer are placed into communication by needle punching.

25. The absorbent article of Claim 24 wherein said body-contacting vaginal discharge layer on the body side are combined by using said needle punching which vertically integrates the body-contacting vaginal discharge layer and said absorbent storage core.
26. An absorbent article according to Claim 24 wherein the absorbent article has a backsheet layer which comprises a discharge impermeable material.
27. An absorbent article according to Claim 24 wherein said absorbent article comprises a width ranging from 25 – 60 mm.
28. An absorbent article according to Claim 24 wherein said absorbent article comprises a length ranging 40 – 130 mm.
29. An absorbent article of Claim 24 comprising an acquisition layer which is in communication with said absorbent storage core.
30. An absorbent article of Claim 24 wherein said absorbent core comprises a fibrous absorbent gelling material of greater than about 50% wherein said absorbent core has ----in the 28 day sludge test.
31. An absorbent article of Claim 29 wherein a portion of said acquisition layer that underlies said absorbent storage core is a result of said needle punching process.
32. An absorbent article of Claim 24 wherein said absorbent storage core comprises absorbent gelling material.

33. An absorbent article according to Claim 24 wherein said absorbent article comprises water dispersible and toilet flushable components.
34. An absorbent article according to Claim 24 comprising an absorbent storage core, said core comprising an integral web of fibrous material and optionally comprising absorbent gelling material, said core having multiple fenestrations therethrough.
35. An article according to Claim 33 wherein said fenestrations are in the form of slits.
36. An absorbent article according to Claim 34 wherein said slits are in a cross machine direction.
37. An absorbent article according to Claim 34 wherein said slits are in a machine direction.
38. An absorbent article according to Claim 33 wherein said slits are in a cross machine direction and a machine direction.
39. An absorbent article according to Claim 36 wherein said slits are about 5.0 to about 10.0 mm long in the machine direction.
40. An absorbent article according to Claim 36 wherein said slits are about 7.0 mm long in the machine direction.
41. An absorbent article according to Claim 36 wherein said slits are separated by at least about 5 to about 10 mm in the machine direction.
42. An absorbent article according to Claim 35 wherein said slits are about 5.0 to about 10.0 mm long in the cross machine direction.
43. An absorbent article according to Claim 35 wherein said slits are about 7.0 mm long in the cross machine direction.
44. An absorbent article according to Claim 35 wherein said slits are separated by at least about 5 mm in the cross machine direction.

45. An absorbent article according to Claim 35 wherein said slits are separated by at least about 5 mm to about 10 in the cross machine direction to the next adjacent row.
46. An absorbent article according to Claim 34 wherein said slits are 5 – 10 mm distance away.
47. An absorbent article according to Claim 24 comprising an insertion means.
48. An absorbent article according to Claim 47 wherein said insertion means is an applicator.
49. An absorbent article according to Claim 24 wherein said absorbent article comprises an external applicator device that works together with said absorbent article to push said absorbent article into a labia.
50. An absorbent article according to Claim 47 wherein said insertion means is an insertion device which comprises a foldable reinforced tab with a folding line which is integral with the article.
51. An absorbent article according to Claim 47 wherein said insertion means comprises a grasping means.
52. An absorbent article according to Claim 47 wherein said insertion means comprises a grasping means extending outwardly from said article.
53. An absorbent article according to Claim 51 wherein said grasping means comprises a foldable tab.
54. An absorbent article according to Claim 51 wherein said grasping means is fashioned from a portion of said absorbent core.
55. An absorbent article according to Claim 24 wherein said absorbent storage core is divided into multiple sections so that said sections are reticulated.
56. An absorbent article according to Claim 24 wherein said article comprises absorbent particles that are able to adapt to any shape of the labia.
57. An absorbent article according to Claim 24 wherein said article comprises a peak force less than 20 grams according to the V Bend Test.

58. An absorbent article according to Claim 50 wherein said article comprises a peak force of less than 50 grams according to the V Bend Test.
59. An absorbent article according to Claim 24 wherein said article comprises a peak force of less than 200 grams according to the L Bend Test.
60. An absorbent article according to Claim 24 wherein said article comprises bending stiffness of less than 5 kPa according to the L Bend Test.
61. An absorbent article according to Claim 50 wherein said foldable reinforced tab comprises a stiffness of less from about 10 grams to about 60 grams to the Keel Insertion Stiffness Test.
62. An absorbent article according to Claim 50 wherein said foldable reinforced tab has a dimension of a length of less than 30mm and a width less than 15mm where it is attached to a backsheet such that the area said attachment of the tab to the backsheet is less than 450 sqmm.
63. An absorbent article according to Claim 50 wherein said foldable reinforced tab has a graspable dimension greater than about 300 sqmm with a height greater than about 18mm and a length greater than about 16mm.
64. An absorbent article according to Claim 24 wherein said absorbent storage core should achieve at least a level of "product disintegration" greater than 90% in the 28 day sludge test method after 7 days.
65. A consumer product kit comprising:

Wherein said kit can comprise sanitary napkins, tampons, interlabial products, or oral contraceptives